

## WHAT IS CLAIMED IS:

1. An electric charging apparatus including a secondary battery, attachable/removable to/from an electronic apparatus main body which can be driven with  
5 said secondary battery, said electric charging apparatus comprising:

reception means for receiving residual capacity information of the secondary battery, detected by the electronic apparatus, from the electronic apparatus;

10 and

display control means for displaying a battery residual capacity based on the residual capacity information received by said reception means.

- 15 2. The charging apparatus according to claim 1, wherein said display control means displays a display pattern in correspondence with the residual capacity information.

- 20 3. The charging apparatus according to claim 1, further comprising:

electric power input means for inputting a driving voltage based on a commercial power source; and

- power source relay means for relay-outputting the  
25 driving voltage inputted by said electric power input means, in addition to an output voltage from the secondary battery, to the electronic apparatus.

4. The charging apparatus according to claim 3,  
wherein said power source relay means selects higher  
one of the output voltage from the secondary battery  
5 and the driving voltage from said electric power input  
means, and supplies the selected voltage.

5. An electronic apparatus, which an electric charging  
unit including a secondary battery is  
10 attachable/removable to/from, and which can be driven  
with electric power from the secondary battery,  
comprising:

residual capacity detection means for detecting a  
residual capacity of the secondary battery at  
15 predetermined timing when the electric charging unit is  
attached to said electronic apparatus; and

residual capacity transmission means for  
transmitting residual capacity information detected by  
said residual capacity detection means to the electric  
20 charging unit,

wherein the predetermined timing is a status  
where the secondary battery is under an approximately  
constant electrical load.

25 6. The electronic apparatus according to claim 5,  
wherein said residual capacity detection means detects

the residual capacity based on an output voltage from the secondary battery.

7. The electronic apparatus according to claim 5,  
5 wherein said electronic apparatus is an image printing apparatus which performs image printing by driving a print head.

8. The electronic apparatus according to claim 7,  
10 wherein said image printing apparatus is an ink jet printing apparatus which forms an image on a printing medium by discharging ink from the print head.

9. A battery residual capacity display control method  
15 in an electric charging apparatus including a secondary battery, attachable/removable to/from an electronic apparatus main body which can be driven with the secondary battery, said method comprising:

a reception step of receiving residual capacity  
20 information of the secondary battery, detected by said electronic apparatus, from said electronic apparatus;  
and

a display control step of displaying a battery  
residual capacity based on the residual capacity  
25 information received in said reception step.

10. A battery residual capacity detection method in an electronic apparatus, which an electric charging unit including a secondary battery is attachable/removable to/from, and which can be driven with electric power  
5 from said secondary battery, said method comprising:

a residual capacity detection step of detecting a residual capacity of the secondary battery at predetermined timing when the electric charging unit is attached to the electronic apparatus; and

10 a residual capacity transmission step of transmitting residual capacity information detected in said residual capacity detection step to the electric charging unit,

wherein the predetermined timing is a status  
15 where the secondary battery is under an approximately constant electrical load.

11. A printer apparatus, which an electric charging unit including a secondary battery is  
20 attachable/removable to/from, and which can be driven with electric power from said secondary battery, comprising:

a motor;

a voltage detection unit configured to detect an  
25 output voltage from the secondary battery in a case where the electric charging unit is attached to said printer apparatus;

a memory configured to hold voltage information detected by said voltage detection unit upon dummy-excitation of said motor; and

residual capacity transmission means for  
5 notifying a residual capacity of the secondary battery to the electric charging unit based on the voltage information stored in said memory.

12. An electric charging apparatus including a  
10 secondary battery, which is attachable/removable to/from an electronic apparatus main body which can be driven with said secondary battery, said electric charging apparatus comprising:

a communication unit configured to perform  
15 communication with the electronic apparatus;

a display control unit configured to, when residual capacity information of the secondary battery detected by the electronic apparatus is received via the communication unit, display a battery residual  
20 capacity based on the residual capacity information; and

a control unit configured to control electric charging of the secondary battery.

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